



**Fermilab**

Cryogenic Safety  
Subcommittee

## CRYOGENIC SAFETY SUBCOMMITTEE MEETING MINUTES<sup>①</sup>

CSS members (P=Present, A=Absent, G= Guest)

Arkadiy Klebaner, Chair	P	Phil Pfund, Recorder	P	Bill Cooper	A
Mike Geynisman, Deputy	P	Jim Kilmer	A	Alex Martinez	P
Bob Sanders	P	Rich Schmitt	A		

**Date:** June 17, 2009

**Time:** 1:00 am

**Place:** MW9, "Outfield" Conference Room

**Agenda:**

1. Approve last meeting notes – all.
2. Updates from panels – all.
3. LSC Meeting Summary – Arkadiy Klebaner
4. Update on TCE work – Mike Geynisman

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1. Minutes of 4/15/09 were approved with the change requested by Mike.
  2. Minutes of previous meetings are posted at: [http://www-esh.fnal.gov/pls/default/esh\\_home\\_page.page?this\\_page=12288](http://www-esh.fnal.gov/pls/default/esh_home_page.page?this_page=12288).
  3. Arkadiy reported on the MTF panel review of the HINS cryostat. The first round of review activity looked good. The final walk-through is scheduled for Friday June 19<sup>th</sup>. There is no other activity.
  4. Alex reported on CDF and Minos Hall, experiment T-962. T-962 has been approved to run. The CDF panel was asked by Del Allspach for guidance with respect to required analysis and documentation for rented dewars. They are

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<sup>①</sup> Note: These minutes are distributed to all members of the CSS via e-mail to obtain their comments. Approval is sought at the next meeting. After approval, these minutes are distributed as indicated and posted to the Web.

currently renting a dewar and want to change vendors. He is asking what kind of documentation, engineering notes, etc. will be required by the panel for vended equipment or subsystems. Del will require the vendor to comply with B31.3 and the ASME pressure vessel code, plus provide a written statement of compliance. During the discussion it was suggested that future revisions of the FESHM chapters should provide more clarification on the safety documentation required for vended systems. Alex will draft a TA listing guidelines for procuring or renting dewars. Phil, Mike and Bob will assist.

5. Phil reported that the Village Panel has begun a review of the QUIET Cold Black Body Cryostat in Lab 3. This is a vacuum vessel containing an epoxy, called Eccosorb CR-112, attached to a cold head of a cryocooler. The Eccosorb is cooled to 20K-40K, and its thermal radiation (mainly microwaves) is used to study microwave detectors used for CMB polarization research. The device would be operated at several locations over the next several years (2009-2011): PPD Lab 3 Highbay, PPD Lab A, and at KICP at the University of Chicago. The panel has generated a list of required analyses and documents. There has been no other activity since the last meeting.
6. Phil reported that a review of the liquid Argon and liquid Nitrogen dewars in MP9 has begun. The dewars are used to supply room temperature gas to the SRF clean room assembly and the welding glove box in MP9. The dewar system was designed, supplied, owned and maintained by a vendor. As a result, the need for a cryogenic system review was overlooked. This has been corrected and a review is in progress. The MP9 personnel have extended the warm gas plumbing to reach the clean room and welding glove box.
7. Mike reported on the D0 panel activities. The panel is working with the D0 staff to evaluate safety for repairs to the LN2 dewar 39. Dewar vacuum is poor, probably due to a leak in the nitrogen top fill line. A report will be issued by Mike Sarychev.
8. Mike reported on the NML panel activities. The panel is working with AD/Cryo to review documentation submitted for preparation of CC2 cool down. Issues include the CC2 engineering note, ODH analysis for Lab B and a few housekeeping items. CC2 is ready for installation and cool down pending panel review, recommendation and Division approval. The original CC2 engineering note did not seek a Director's exemption, which we now know is required. The revised note, which is in preparation, will seek the exemption. The NML ODH analysis will be amended and reviewed.
9. Bob reported on the activities of the Meson Cryogenic Safety Panel. The panel reviewed documentation and recommended that the HTC cave (also referred to as the Horizontal Test Stand (HTS)) be reclassified to an ODH 0 classification. The documentation included a written LOTO procedure which was verified with a walk-through of the facility. The panel has just begun to review

documentation for significant changes to the HTC and HINS caves in the Meson Detector Building. A Walk-through is scheduled for the afternoon of June 17<sup>th</sup>.

10. Bill submitted a written report on the Tevatron panel activities. On May 11, the Panel was informed by Elvin Harms that a 1.3 GHz superconducting RF cavity had been successfully tested at A0 with passive pumping. On May 12, we reviewed and inspected system modifications which included the installation of rupture disks having a lower set pressure and venting the disks outside the A0 North Cave. We subsequently received an operating procedure which addresses the use of active pumping during cavity conditioning. We recommended that authorization be given for testing cavities with active pumping during conditioning. Roger Dixon gave that authorization on May 14.
11. Jim submitted a written report indicating no H2 targets panel activity since the last meeting.
12. Arkadiy reported on the LSC meeting. The only cryogenic related item was a "thank you" for help provided by cryogenic personnel in setting up the Mr. Freeze show.
13. Mike updated the Subcommittee on his continuing efforts to use one of the Cryogenic Engineering Department's projects as a test bed for the use of Team Center Engineering as a document management system. He reported that a summer student, Tom Barnett is working on it. He will continue to work with Tony Metz.
14. Arkadiy distributed a template which he recommends as a standard means by which to document review comments. It is currently being used by the MTF and NML panels. The template exists in an EXCEL format.
15. Arkadiy led an extensive discussion on a proposal to introduce an ODH Evaluation & Classification front page. A sample front page, once endorsed by the Subcommittee, would become an attachment to FESHM 5064.
16. The meeting was adjourned.

**Next meeting:** Regular subcommittee meetings are scheduled for the third Wednesday on alternating months. The next meeting is scheduled for August 19, 2009 in MW9.

*Minutes drafted by:* Philip Pfund, Recording Secretary [pfund@fnal.gov](mailto:pfund@fnal.gov)  
*Minutes approved by:* Committee